

**Sydney Engineering Heritage Committee
Oral History Program**

Biographical Notes

**James Hassell LIDDLE (1908 -)
Civil Engineer – Refrigeration Engineer**

- Birth & Family:** Born 19 April, 1908, Wellington, New Zealand.
First child of Ernest Alfred Liddle and Maude Florence (nee Martelli)
Siblings John (deceased), Margaret, Peter, Douglas.
- Education:** Primary school at Terrace School, Napier, New Zealand (until 1917)
Secondary schooling – Napier Boys High School, final year at Wellington College.
Tertiary – Victoria College for one year then transferred to Canterbury College, Christchurch to study engineering.
Completed Bachelor of Engineering (Civil), University of New Zealand (1929). Paid for testamur and formal graduation 1933
- Qualifications:** Bachelor of Engineering (Civil), University of New Zealand
Completed 1929
Graduated 1933
- Work History:** Practical work was a requirement of his civil engineering degree and Mr Liddle worked for nine months in the Wellington Tramway Workshops.
When Mr Liddle finished his degree the depression had already struck many jobs and he worked on a number of road building schemes which the New Zealand government instituted as part of unemployed relief schemes, including a project to review the outlet potential of Lake Ellesmere. Mr Liddle was given 3 months notice by Public Works and he reconsidered his plans to travel overseas. His mother had remarried and since 1925 lived in Sydney and she encouraged him to come to Sydney to try and find employment.
High unemployment made finding work in Sydney difficult - preference was given to returned soldiers. He applied for jobs in Queensland and Wollongong but never considered working in any other field but engineering.
Through recommendation, he found work ten months later with Noyes Brothers in the city who needed a refrigeration engineer. Aware of his lack of knowledge about this field, Mr Liddle was ambivalent about working with Noyes Bros but started there in November 1932 as Technical Head of Refrigeration Sales Department.

He later worked with a small firm, Lovelocks, for 3 years. Lovelocks very successful selling refrigeration accessories. Mr Liddle discusses refrigerants then in use – methyl chloride and sulphur dioxide – and commercial refrigeration uses.

Mr Liddle joined the American Society of Refrigeration Engineers, one of only two or three members outside America. He discusses the importation of products from the US and UK.. He became an “avid gatherer of knowledge” in this developing field, importing books on the subject.

Following the death of Mr Lovelock, Mr Liddle joined Unit Air Conditioners, set up by Mr Doyle of United Artists (keenly interested in the air conditioning business for the growing cinema industry). Mr Liddle travelled to the States to explore the potential for silica gel dehydration system and lived in Cleveland for several weeks. This system proved inappropriate in Sydney but because the name Honeywell appeared frequently in relation equipment, he went to Boston to meet with the company and discussed the idea of setting up an agency in Sydney.

Back in Sydney, Unit Air Conditioners went bankrupt and Mr Liddle established his own business working out of a very small accountant's office in Martin Place. A. E. Epstein (Fred Epstein – “Eppy”) arrived from Vienna in 1938. Having sold Honeywell equipment in Europe, he introduced himself and they formed Liddle & Epstein, working together on the MLC Building. Mr Epstein's installation expertise was invaluable.

In 1939 Liddle & Epstein moved offices to the corner of Bridge & Phillip Street, Sydney and then later again to a small office in Macquarie Place. Their business continued to grow and throughout the war they were involved with airconditioning the ADI munitions complex at St Marys. They were also involved with the production of army tanks.

Mr Liddle joined AIRAH (Australian Institute of Refrigeration Air Conditioning and Heating) in 1933 and his involvement developed as the NSW Institute (with a more professional emphasis) and the Victorian Institute (more commercial) decided to amalgamate. Mr Liddle went regularly to Melbourne for work and developed links with different people and recalled the names of a number of individuals, and the companies they worked for, who were involved in the discussions during the early 1940s.

Mr Liddle introduced the psychrometric chart into Sydney. In 1947 he became Federal President of the Institute and, with Harry Goldstein, was involved with the launch of the official journal of the Institute. *EcoLibrium* is now a highly specialized journal for the industry.

In 1957 Liddle & Epstein moved from their offices in Macquarie Place, having purchased a block of land in Macquarie Street, Sydney, and engaged David Snelling to design a building. Liddle & Epstein's business grew with a branches opening in Melbourne (Liddle, Epstein and Warnock), Adelaide (where the Manager was Doug Bell) and Perth. They owned all their premises but those in Perth. One of the significant projects in

Perth was the development of the refrigeration process at Swan Brewery. In 1963 Liddle & Epstein sold out their business to Honeywell (who then continued to lease the building for another 15 years). This was a relationship which extended for 25 years from pre-war days.

After retiring from engineering Mr Liddle did some renovations on his home and purchased a farming property on the Hastings River near Scone where he reared cattle, developing innovative calf-branding equipment. He later bought into another business near Windsor involving the sale of alluvial soils on the Nepean River, and an orange orchard.